

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

ORIGINAL  
(Red)

Analysis of Samples for Dioxin at  
Monsanto, Nitro, West Virginia Original Signed By: **AUG 30 1979**

R. Sarah Compton R. Sarah Compton  
Director, Enforcement Division (3EN00)

Thomas Holloway  
Coordinator, Dioxin Implementation Plan  
Special Pesticide Review Division (TF-791)

This memorandum is to request analyses for the presence of tetrachloro-dibenzodioxin (Dioxin) in several water and solid samples which will be obtained at and near the Monsanto Industrial Chemicals Company plant at Nitro, West Virginia.

Background:

The Monsanto Industrial Chemicals Company plant at Nitro, West Virginia produced the product (2,4,5-Trichlorophenoxy)acetic Acid (2,4,5-T) for a period of at least twenty years; production of 2,4,5-T ceased in 1969. The equipment used to produce the 2,4,5-T was decontaminated, at least to the non-detectable level using analytical techniques available in 1969. Some of the equipment was sold, and whatever could not be sold was buried on company owned property about 1970. The control building for the existing company owned and operated wastewater treatment plant occupies the surface beneath which the old 2,4,5-T production equipment is buried.

In May, 1979, the Appalachian Research and Defense Corporation, a public interest group, learned of the burial of the 2,4,5-T production equipment on Monsanto plant property, in a somewhat garbled version. This led to considerable local press interest and pressure on EPA to investigate.

Monsanto also received considerable pressure, and obtained water samples from the Kanawha River above and below their plant, of city water (used for process water at the plant), of groundwater (unfortunately up-gradient from the burial site), and of their effluent. The effluent discharge pipe passes near the burial site. The results reported by Monsanto are:

|                          |  |
|--------------------------|--|
| upstream, downstream,    | Non-detectable, detection limit 10 ppt |
| city water, groundwater: | (parts per trillion)                   |
| effluent:                | Non-detectable, detection limit 25 ppt |

Monsanto did not obtain or analyze sludge or solid samples.

Proposal:

| CONCURRENCES |  |  |  |  |  |  |  |
|--------------|--|--|--|--|--|--|--|
| SYMBOL       | Region III proposes to obtain the following samples for analysis for dioxin: |  |  |  |  |  |  |
| SURNAME      |  |  |  |  |  |  |  |
| DATE         |  |  |  |  |  |  |  |
|              |  |  |  |  |  |  |  |

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Water Samples - one each: upstream from the Monsanto plant  
downstream from the Monsanto plant  
city water  
effluent  
one or two groundwater samples

Solid Samples - bottom sludge, one each: upstream from the Monsanto plant  
downstream from the Monsanto plant  
waste activated sludge from the wastewater treatment plant  
solid material near burial site

Total: 5 or 6 water samples  
4 solid samples

These samples will be obtained when you direct us to sample.

These samples will then be sent to whatever laboratories you designate.

The Kanawha River Valley has several major organic chemical dischargers, hence there will be some organics in the river water. The effluent from the Monsanto wastewater treatment plant will have several organic chemicals, at the part per million level. The solid samples will also have several organic chemicals present, at probably elevated levels.

**Urgency:**

We wish to respond to the public concern about the possible contamination of the environment by Dioxin from this source. While the Kanawha River is not used as a public water supply below the Monsanto plant, it is a tributary of the Ohio River, which is used as a water supply. Public and press interest in this possible contamination continues.

**Requested Action:**

Region III requests that you arrange for the analysis of the above described samples on a priority consistent with the need to respond quickly to public concern in the Kanawha Valley.

We also request that you inform us when you wish to have the samples taken to minimize holding time. We request that you inform us where, when, and how samples are to be shipped.

We also request any advice or comments you may have on the number and type of samples proposed, or any other advice or comments you may have on this matter.

CONCURRENCES

|         |  |  |  |  |  |  |  |
|---------|--|--|--|--|--|--|--|
| SYMBOL  |  |  |  |  |  |  |  |
| SURNAME |  |  |  |  |  |  |  |
| DATE    |  |  |  |  |  |  |  |

## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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Enclosed is a copy of a letter received from Monsanto Industrial Chemicals Company, reporting their analytical results.

I will be the Region III contact for this project. I can be reached at FTS 597-9846. Thank you very much for any assistance you can provide.

Enclosure

TP 8/28/79  
3EN40:TFIELDING:mf:8/23/79:9434

| CONCURRENCES |         |              |  |  |  |  |  |
|--------------|---------|--------------|--|--|--|--|--|
| SYMBOL       | 3EN40   | 3EN00        |  |  |  |  |  |
| SURNAME      | SAPP    | MANGIARACINA |  |  |  |  |  |
| DATE         | 8/28/79 | 8/30/79      |  |  |  |  |  |